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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,187	06/13/2001	Kurt Ryf	39021-172671	3997

7590

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VENABLE, BAETJER, HOWARD & CIVILETTI, LLP
P.O. Box 34385
Washington, DC 20043-9998

EXAMINER

MILLER, EDWARD A

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/879,187

Applicant(s)

RYF ET AL.

Examiner

Edward A. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13, drawn to a method, classified in class 149, subclass 109.6.
 - II. Claims 14, 15 and 17, drawn to a layered propellant, classified in class 149, sub 14.
 - III. Claim 16, drawn to a propellant, classified in class 149, subclass 96.
 - IV. Claim 18, drawn to ammo, classified in class 102, subclass 430.
2. The inventions are distinct, each from the other because of the following reasons:
3. All the Groups of Inventions, as the claims are currently written, are unrelated except as set forth in paragraph 4 below. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant situation, the method of Group I neither makes nor uses the inventions of any of Groups II, III or IV. The propellant of Group III is distinct from either of the Group II or IV inventions, as it is not a subcombination in either.
4. Inventions IV and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because, as broadly claimed, the subcombination is not patentable. The subcombination has separate utility such as in mining or military explosives, rather than in ammunition.
5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. They all should be completely rewritten to be in proper US form and idiom. Examples of the problems follow. These kinds of problems are found generally throughout all the claims.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as

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to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the instant situation, claim 2 recites the broad “nitrocellulose,” the third word in line 2, but the claim also recites “in particular,” which is analogous to “such as” above, followed by “at least 80% nitrocellulose with a nitrogen content ...”, which is the narrower statement of the range/limitation. The “in particular” problem is found throughout. In claim 17, “high energetic functional material” lacks proper antecedent basis. Claim 3 immediately following has the same problem, but with three parts of differing definition, separated by “in particular” and then by “preferably”. This is for example, only.

The claims recite numerous limitations which have insufficient antecedent basis for in the claims. These start in claim 1, with lines 3-4, “the receptive grain”, claim 6, line 2, “a diffusion depth”, claim 6, line 2, “the high energy plasticizer”, lines 3-4, “untreated green powder”, claim 7, line 2 “the reactor,” claim 9, lines 4, “the reactor tank” and 6, “the remaining liquid components”, claim 10, line 2, “the dried powder mass” and so on throughout the claims. In claim 3, line 2, “the grain” has a different kind of improper antecedent basis problem, as it is not clear if this refers to the claim 1, line 4 starting “receptive grain”, or the line 1 product “layered grain.”

Numerous instances of inconsistent, indefinite expressions are found throughout. These include recitation of structures IV-VI in claim 4, which are undefined in the claim. In claim 1, line 2 requires both plasticizer and deterrent, while line 3, with “and/or” permits only one of the ingredients, which is inconsistent, and renders all following claims that seek to limit or further define either ingredient improper since neither ingredient is affirmatively required. In claim 1, line 4, note “watery emulsion.” Does this mean that one phase of the emulsion comprises an aqueous phase

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without any limitation on viscosity, the emulsion has a physical similarity, such as viscosity, to water but not requiring any water in the emulsion itself, or something else? In claim 13, the molecular weight (range?) is improper and not understood. In the various claims, including claim 14, for example, reference to green powder is indefinite, as it is not clear whether this requires a barium salt to generate green light, if it requires a green pigment as a burning catalyst, if it is coated with some green color as a camouflage, if this refers to something in an uncured state, e.g., prior to chemical cross linking, or something else. In claim 15, the term "substance" is used for several different inconsistent possibilities in lines 3 and 5, which is indefinite. Does the line 4 recitation of 10-60% of the dry substance imply a solution or slurry of the line 3 substance, therefore requiring a corresponding 40-90% solvent or liquid, when the substance is not dry? In claim 16, lines 5 and 6, the same problem with "substance" occurs again. In line 6 of claim 16, is the substance in the powder form, or the dough form? It is noted that either may be water-free, e.g., dry. Throughout, terms are used which are non-specific and which cannot be understood, including using terms of structure, such as dough or grain, instead of terms of substance or composition, such as what dough, e.g., comprises or consists of, and vice-versa.

The method claims throughout are indefinite as to whether the steps are required in any order, and the relationship of the steps of the dependent claims to those in the claims they depend from. This particularly relates to the use of the passive voice for verb forms, with a lack of any specified relationship between the steps, to engender this indefiniteness.

Claim 18 is incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: what comprises the elements of the ammunition other than the so called "powder." As to claim 17, what is the functional material? Essentially all materials have some function or use. To the extent that claim 17

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only specifies a name, e.g., "propellant" for the same stuff from claim 14, such violates 35 USC 112, 4th paragraph for failing to further limit the claim it depends from, or this language is indefinite as to what further limitation this requires. Any limitation implied by the use of the grain (?) of claim 14 as a propellant, cannot be reasonably determined, and so the metes and bounds thereof are not clear. Again, these are exemplary, not exhaustive, of the problems found throughout. The claims must be completely rewritten to be in good USA form.

10. It has been held improper, indeed, reversible error, to rely on speculation as to the meaning of indefinite claims, and then reject that speculative meaning on prior art. *In re Steele*, 305 F.2d 858, 134 USPQ 292 [CCPA 1962], *Ex parte Brummer*, 12 USPQ2d 1653 at 1655 [USPTO BOPAI 1989]. Therefore, no action based on prior art is included as this time, as the claims are so indefinite that they cannot be understood.

11. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
April 8, 2003



EDWARD A. MILLER
PRIMARY EXAMINER